

11/2/20
For report to President
& Congress

Conservation of the Alaska salmon

The first salmon cannery in Alaska was established in 1878. From that time until the present the industry has grown so that there are 134 canneries yielding products with an average annual value of about \$35,000,000 and giving employment to more than 20,000 persons. During the earlier years the industry maintained a rather steady growth in accordance with the demand for canned salmon, there being no shortage of fish despite unwholesome practices of barricading streams and other wasteful methods. As time went on, certain regulatory measures were undertaken within the limits of the laws enacted for that purpose. These served to alleviate but did not check the inroads being made upon the capital stock of Alaska's greatest resource. The peak of production was reached in 1918, when 6,605,835 cases of salmon were packed. Since that date the yearly pack has been as follows: 1919, 4,583,688 cases; 1920, 4,429,463 cases; 1921, 2,596,826 cases; 1922, 4,501,652 cases; 1923, 5,035,697 cases; 1924, 5,294,915 cases; and for the year 1925 the pack has been estimated at 4,300,000 cases. The pack in 1925 is smaller than in any preceding year since 1914, except for the year 1921 when, on account of the severe business depression, many canneries did not operate.

Previous to 1924 the salmon fisheries of the Territory were being rapidly depleted year by year. While the yearly pack had not appreciably decreased, the fact that depletion was taking place to a very serious extent was apparent. It was evident that the annual pack was being fairly well maintained only by ever increasing fishing operations.

Gear became more extensive in character and amount than ever before. Operations were extended to waters not previously considered profitable for commercial exploitation. Finally, productive rivers failed to yield their former quota. Observations made on the salmon spawning grounds showed in many instances a grave shortage of breeding salmon.

The Department of Commerce, charged with the enforcement of the law for the protection of the fisheries of Alaska, was helpless in the matter. This law, as it existed prior to 1924, gave very little in the way of authorizing the placing of restrictions upon the ever increasing drain on the fishing resources. Such authority as existed, when exerted to the utmost, proved almost wholly ineffective. The law, it is true, imposed police powers upon the agents and employees of the Department of Commerce, but it did not take cognizance of changing conditions. Had the conditions remained indefinitely as they were when the legislation was enacted there would have been little need for revision. The law of 1906 was probably sufficient for the conditions that obtained at that time, but it could not function with any degree of efficiency 15 or 20 year later.

The law of June 6, 1924, gave broad and comprehensive power to the Secretary of Commerce to regulate and conserve the Alaska fisheries. Acting under this authority the Secretary, within a few days of the approval of the Act, promulgated regulations that placed the salmon fisheries upon an entirely different basis. The objective point was now the upbuilding and maintenance of the fishery resources of Alaska at their maximum capacity. The immediate output of fishery products was a matter of secondary consideration in so far as it was at variance with conservation.

The key to the problem of conserving Alaska's salmon fisheries is the securing of a sufficient escapement of breeding salmon to the spawning grounds, and Congress has declared that this escapement shall be not less than 50 per cent of the run each year. With the end by which conservation may be secured clearly in view, the steps that must be taken to secure that end are much easier of accomplishment.

The regulations issued in June, 1924, under the authority of the new legislation, were somewhat less drastic than would have been the case had it been possible to issue them before the fishermen began their season's work with their operations planned under the old law and regulations. The regulations issued for the season of 1925 were much more stringent in character. Provision was made for 12 general fishing areas. These areas were so defined that the restrictions necessary to bring about the proper escapement would be practically the same throughout any one area. Regulations varying according to the local circumstances were prescribed for each area separately. Restrictive measures have taken the form chiefly of limited close seasons, the total prohibition of certain forms of fishing gear, and limitations on the size and amount of such fishing gear as is permitted. In 76 specific fishing grounds, fishing for salmon is entirely prohibited.

One of the means of restricting salmon fishing operations in 1925 was the requirement of a distance interval of $1\frac{1}{2}$ miles between traps in the Icy Strait-Lynn Canal district of southeastern Alaska. Previous to this the distance interval was 1,800 feet. In the season of 1924, 76 traps were operated in this district, which took a total of 3,797,392 salmon, an average of 49,966 per trap. Under the new restriction only 56 traps were operated in 1925, a reduction of 20, or 26 per cent.

These 56 traps took 2,951,177 salmon, or an average of 52,700 per trap. A striking feature of this is the fact that nearly 850,000 fewer salmon were taken in 1925 than in 1924 by traps in these waters which for many years have been the scene of the most intensive trap fishing in Alaska. There was a small increase in the average catch per trap in 1925, but this would be a logical and natural result of the reduced number of traps.

In order further to protect the greatly depleted run of red salmon to the spawning grounds of this district in the headwaters of the Chilkat and Chilkoot Rivers, all commercial fishing was prohibited in the waters of Lynn Canal north of the south end of the first island south of Seduction Point. This resulted in considerable agitation, it being alleged that the regulation was discriminatory and prevented the natives of the Chilkat-Chilkoot region from fishing for salmon while the traps which could still be operated in waters lower down caught the fish bound for the Chilkat and Chilkoot Rivers. As the cannery at Haines for which these natives fished was not operated in 1925, it was not possible to determine the extent to which catches would have been made with gill nets below the closing line, but there is ample evidence that there was a heavy reduction in the catch made by traps due to the increased distance interval imposed in respect to them. No hardship resulted so far as the natives were concerned, as there was ample opportunity for them to secure employment in a shrimp cannery and elsewhere. The restrictions on gill net fishing in Lynn Canal waters were removed in the fall, thus giving the natives and others a full opportunity to catch coho and chum salmon, the runs of which were not so much in need of protection.

An investigation later in the season developed the gratifying fact that there was a good escapement of red salmon to the Chilkat and Chilkoot

spawning grounds, thus showing the beneficial effects of the regulations.

The stoppage of all commercial fishing for salmon in the Yukon area has put an end to any apprehension that the natives of the interior of Alaska will be deprived through commercial fishing of a supply of food either for themselves or for their dogs. Commercial fishing operations will be prohibited in the waters off the mouth of the Kuskokwim River in 1926. This river also penetrates far into the interior of Alaska, and the conditions inland are somewhat similar to those that obtain along the Yukon. Both flow into Bering Sea.

In securing a 50 per cent escapement of salmon, as required by law, weirs have been constructed in a number of important salmon streams at which the number of fish escaping fishery operations may be actually counted. These counting operations not only enable the Department to regulate fishing in the immediate waters involved, but the results obtained serve as a check upon requirements in other waters. As a result of counts made at weirs in the Chignik and Karluk Rivers in 1925, commercial fishing operations were suspended for certain periods in the adjoining waters by direction of the Department.

A line of scientific work is being carried on by the Bureau of Fisheries, which it is expected will be of the greatest value in determining where restrictions on fishing will be most effective for the protection of the runs of salmon to specific streams. This is the tagging of salmon and the compilation of data regarding the time and place of their recapture. For the past three seasons work of this character has been carried on along the Alaska Peninsula, and during 1924 and 1925 in parts of southeastern Alaska. It seems certain that salmon follow definitely established routes of migration in returning from their feeding grounds in the ocean to the

streams in which they will spawn. No matter how complete the protection given immediately off the mouth of the spawning stream may be, the run will be in danger of depletion if the various kinds of gear are permitted to capture the fish unrestrictedly along the route of migration. When these migration routes are better known it will be possible to effect the necessary protection for certain runs all along the route over which they will pass to reach the spawning grounds. This, of course, is a complicated problem, but it is felt that progress is being made each year, and just as fast as knowledge warrants, restrictions can be imposed under the authority of the present law.

A special investigation was made of the spawning grounds of the Copper River region. This was not as comprehensive as some surveys, but it seems clear that the run of red salmon in 1925 was much smaller than usual and that there was consequent underseeding of the spawning beds despite the stringent regulations imposed by the Department upon fishing in waters of the Copper River Delta. In some places the native residents of the Copper River watershed made sufficient catches to provide for their local food requirements, while in other cases it is reported that there was a shortage although not of a serious nature. The run of king salmon in the Copper River in 1925 was of normal proportions.

An active patrol of the fishing grounds of Alaska was carried on throughout the fishing season, extending from May to September, according to the locality. In 1925 nearly 200 persons were engaged, including the Bureau's regular field force in Alaska, and about 125 stream guards temporarily employed who were stationed at the mouths of important salmon streams to prevent unlawful fishing in closed waters. Ten vessels owned by the Bureau were engaged on patrol work and an equal number were specially chartered for varying periods. A number of small boats were also used by stream guards.

10/29/25

Following are a few extracts from reports of experienced employees of the Bureau of Fisheries showing the satisfactory escapement of salmon to the spawning grounds in a number of streams in Alaska in the season of 1925:

South Arm, Port Beauclerc (2 streams): J. W. Hynes, Sept. 18, 1925.

There has been an exceedingly large run of chums here a little earlier in the season, as the stream is crowded with spent fish. Estimated about 20,000 humpbacks and 2,000 chums spawning at the present time, and there are many large schools of humpbacks still in the bay.

Point Barrie: J. W. Hynes, Sept. 19, 1925.

Went up stream about 4 miles; there is a tremendous run of humpbacks there at present although the water is exceptionally low.

Eagle Creek: J. W. Hynes, Sept. 30, 1925.

Went up stream for about a mile. Estimated at least 50,000 humpbacks spawning. They were absolutely packed in the stream.

Thoms Bay: Geo. W. Card, Aug. 26, 1925.

Went up stream about 2 miles. Stream is well supplied with fish all the way and still there are many in the bay. The protection they have had the last three years is why there are so many this year.

Paul Young Creek: W. N. Dean, Sept. 16, 1925.

Fish showing everywhere. Walked up stream about a mile and saw fish lying around thick. At a conservative estimate I should

Judge there are 75,000 fish in and around the mouth of the stream.

Cholmondeley Sound, West Arm:

W. N. Dean, Sept. 17, 1925.

There were about 1,500 or 2,000 fish playing around the mouth of the stream, most of them being humpbacks. As we proceeded upstream, fish were lying around thick. Some fish were making their way upstream.

Moirs Sound, North Arm:

W. N. Dean, Sept. 17, 1925.

There were fish everywhere around the mouth of stream. There was lots of water and probably 20,000 or 30,000 fish around mouth of stream. Walked up sides of stream and saw fish thick all over. About 90 per cent of these were humpbacks and the rest dogs. This stream has more fish in sight than any we have visited.

Johnson Cove:

W. N. Dean, Sept. 18, 1925.

There were 20,000 or 25,000 fish playing around mouth of stream. Went upstream for a considerable distance and the fish were thick all the way up, about 70 per cent of which were humpbacks and the rest dog salmon.

Dickman Bay, West Arm:

W. N. Dean, Sept. 23, 1925.

Followed upstream considerable distance. It is full of fish, about 80 per cent of which are dog salmon and the rest humpbacks.

Dickman Bay, South Arm:

W. N. Dean, Sept. 24, 1925.

This is one of the greatest fish streams we have visited at any time. There were a few fish around mouth of the stream, but dead and decayed spent fish were lying around in thousands. We went a considerable distance upstream, and as far as we went the fish were just as thick. There seemed to be no end to them.

Keegan Creek:

W. N. Keegan, Sept. 24, 1925.

Some natives were camped here curing fish. Went upstream for some distance. Quite a number of fish in stream.

As bearing further upon the generally satisfactory escapement of breeding salmon secured in Southeastern Alaska in 1925, the following is extracted from the report of an agent of the Bureau of Fisheries:

We have heard no discouraging reports from any quarter relative to the escapement, on the contrary all reports reaching us from those living in the various localities in Southeast Alaska, hunters, trout fishermen and others are to the effect that the escapements in the various localities are the best they have seen for years and in most cases remind them of old times. While the pack was light in this immediate vicinity, in comparison with some other years, the reports of escapement are most encouraging.

The foregoing are examples selected at random among the numerous cases that could be cited of specific results due to the Department's regulations in securing an adequate escapement of salmon to the spawning grounds to maintain future runs at their maximum plane of productivity. These results have not been secured in all cases, as there are reports of streams in some localities which have not had as large escapements of breeding salmon as are considered essential for the future welfare of the salmon industry. In these cases further and more drastic regulations will be made effective and will be continued in force until the desired results are secured.

As contrasted with the situation in Southeastern Alaska, attention is called to the Bristol Bay region of Western Alaska which is the scene of the most important red salmon fishery of the Territory. Stringent regulations in regard to the length of the season and the character of fishing apparatus had been imposed, but upon arrival about the middle of the season

of the Commissioner of Fisheries, who was accompanied by Congressman White and Congressman Free of the Committee on Merchant Marine and Fisheries, it was discovered that the run was exceedingly light and that there was an insufficient escapement of salmon to the spawning grounds. Further regulations were immediately imposed, but notwithstanding this action, subsequent investigation showed that the spawning grounds were inadequately seeded. Additional restrictions upon commercial operations will be necessary to reestablish the runs in this region.

Following are extracts from the report on the inspection of Iliamna and Lake Clark spawning grounds, of the Bristol Bay district:

"The Iliamna River harbors no salmon and the natives have not caught enough to eat at any time during the season. They are prospecting every stream where a few salmon can be caught and have but a small portion of the number taken in average years. All were taken in the streams along the north shore and away from Iliamna River.

"Trips were made to all the principal spawning areas in the district and everywhere the same depleted condition was noticeable. Practically all the fish entering some of the smaller streams were taken by natives for home consumption and dog feed.

"We estimated that 15,000 red salmon covered everything that this season represented in Kokhonak Creek, or about 9% of last season, which was also small in comparison with other years.

"The conditions in Copper River duplicated those of Kokhonak Creek as to numbers and size. A close check was made of those dead on the banks and in the water and also those alive in the stream which together totaled about 25,000 red salmon, or 17% of last year.

"On our trip up the Newhalen River en route to Lake Clark few spawners were noticed and small numbers appeared on the drying racks at the different fish villages we passed.

"Very few fish were in evidence over the entire Lake Clark district.

"None were visible along the lake shore and on the Tarnalian beach in the lake near the mouth of Tarnalian Creek there was registered a complete failure, the first in 30 years to the knowledge of local white men having lived at this point.

"There were about 200 red salmon spawned in the Woody Island Lakes. Many of the smaller streams contained more salmon than last year, although the numbers were few, but in the aggregate were far less, in fact about 10 per cent of last year.

"In summing up the escapement and results in this area we must report a discouraging outlook for the future of this cycle. It has been the poorest escapement in the history of the industry according to old residents who have fished in the lakes for home use for over 30 years. It became necessary for the natives to kill more than half of their sled dogs at the date of our visit and many more dogs will follow before snow falls. In years of scarcity such as this, the natives require nearly all the salmon for home use that escape the commercial fishermen to the utter depletion of some streams, and this coupled with the small size of the fish filtering through the commercial nets which comprised most of the escapement and were mainly males, presents a most discouraging prospect."

Like the Bristol Bay region referred to above, there are various other waters suffering from an inadequate seeding of the beds this year in consequence of which further restrictive measures in the regions affected will be necessary. Following extracts from a number of reports by employees of the Bureau of Fisheries showing this condition:

Southeast Alaska.

Eagle

Eagle River: (F. W. Hynes, Aug. 21, 1925.)

The men said there had been no boats fishing in Bradfield Canal this season. Returned to Eagle River and ascended several miles on the flood tide. The stream averages 300 feet in width and is swift and murky. I have been told that this stream has a good run of kings and quite a fair run of chums and humpbacks, but we saw no spent fish of any species, and none were ascending, so the old trap which used to be across the mouth must have just about cleaned them up.
(F. W. Hynes, Sept. 6, 1925.)

Went up Eagle River at the head of Bradfield. Got up about 5 miles above the mouth, using the outboard motor. Examined both branches of the stream but found absolutely no evidence of any salmon run, although there were many hair seals in the stream.

Shoemaker Bay: (F. W. Hynes, Aug. 25, 1925.)

Examined a small stream there, but found no salmon, although there is plenty of water to accommodate a small run.

Port Protection: F. W. Hynes, Sept. 16, 1925.

Covered the bay thoroughly with the skiff and outboard motor but found no salmon run in any of the several small streams. No fishing boats were seen during the day.

Dundas River: M. J. O'Connor, Aug. 3, 1925.)

The Dundas River was fished intensively. It was estimated there were about 18,000 red salmon taken there. It is doubtful if this number went up to the spawning beds. Stream Watchman H. Sokoloff did not report anything like that number going up the stream.

St. James Bay: (M. J. O'Connor, Sept. 25, 1925.)

The stream carries considerable silt after rains. There were only about 600 spawned chums seen, usually between 35,000 and 40,000 salmon spawn here.

Alaska Peninsula.

Bear River Lake: (L. G. Wingard, Aug. 19, 1925.)

The total escapement into Bear River Lake was a little better than 50,000 fish. It should have been 200,000 in my opinion.

Ikatan: (L. G. Wingard, Aug. 4, 1925.)

Anchored off stream flowing from lake about 2 miles below Ikatan cannery. Walked around lake without seeing a single red salmon. This lake was stocked with red salmon several years ago.

Kerovin Bay: (W. M. Laing, Aug. 18, 1925.)

Examined the lake and stream but saw only a small amount of fish.

In addition to seeing that there is full compliance with that requirement of law of a 50 per cent escapement of salmon, it is the practice and aim of the Department to require and secure a greater escapement in those instances where depletion through overfishing or for natural causes necessitates such action. In short, the sole objective is to reestablish the runs of salmon and maintain them upon their highest possible level. At the same time it is the Department's policy to stimulate the fullest use of Alaska's fishery resources, consistent with requirements of law and the necessities of conservation. This is conservation in its highest sense.

The new and comprehensive act of 1924 and the broad regulatory authority which it gives to the Secretary of Commerce assure the future welfare of the fisheries of Alaska. Definite progress has already been made, continued beneficial results will follow, and eventually there will be full restoration of the former abundance of salmon in Alaskan waters.

Refer to closing down
of Chignik and Karluk
to permit escapement
to equal catch.

Refer to Lynx Carol natives

Yukon has been closed
Kuskokwami to be

thus coming ashore and at some
time arising food supply for natives

Quite few attracted yellow
sheets